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<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/608,640	GOODMAN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Anthony Gutierrez	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--  
All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- 1. ☒ This communication is responsive to the amendment filed 2/15/05.
- 2. ☒ The allowed claim(s) is/are 1-42.
- 3. ☒ The drawings filed on 6/27/03, 2/15/05 are accepted by the Examiner.
- 4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  - 1. ☐ Certified copies of the priority documents have been received.
  - 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).- \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

- 5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  - 6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.  - Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

- Attachment(s)**
- |   |  |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

***Allowable Subject Matter***

1. Claims 1-42 are allowed.

2. The following is an examiner's statement of reasons for allowance:

The Applicant's claimed invention is deemed allowable over the prior art as the prior art fails to disclose, teach, or fairly suggest a method of analyzing flutter test data that includes simultaneously fitting a number "N" of damped sine waves to a plurality of data points recorded by a corresponding measurement device, and determining a set of modal frequency and damping values based on all the data sets (with respect to claims 23-42) and more specifically, based on the simultaneous fitting of all the data sets (with respect to claims 1-22).

The Examiner has chosen to interpret the language of independent claims 23 and 34, to be consistent with independent claims 1 and 12 with respect to the values being based on either "all the data sets", or "the simultaneous fitting of all the data sets", as the Applicant has argued in his previous response that analogous reasoning with respect to the limitations of 12, 23, and 34, apply to the invention of claim 1.

This is further supported by the written description in the specification. Since all claims, as amended, contain the step of simultaneous fitting the waves, and since the only discussion of simultaneous fitting of waves occurs on page 6, lines 17-27, immediately following the support for the determination of frequency and damping values through the use of Equation 1, on page 5, then either the newly amended limitations being based on either "all the data sets", or "the simultaneous fitting of all the data sets", are equivalent, or one is unsupported in the specification. The Examiner

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considers them to be equivalent and fully supported in the aforementioned sections of the specification.

The closest art of record is US Patent 6,574,570 to Sato et al.. This method involves the simultaneous fitting of a number "N" of damped sine waves to a plurality of data points recorded by a corresponding measurement device, and determining a set of modal frequency values, as addressed in the previous rejection, the Abstract and Figures 1 and 16.

It does not, however, disclose or suggest determining damping values based on all the data sets or the simultaneous fitting of all the data sets. The damping coefficient is determined before the simultaneous fitting (See Fig. 1) and therefore is not determined based on the simultaneous fitting of all the data sets. Although the damping coefficients are determined **for** all the data sets (by an equivalent linearization method), they are not determined **based on** all the data sets.

The Examiner also cited US Patent 5,610,837, to Murphy, in the previous action indicating that it contained the limitations of claims 1 and 2 of the Applicant's claimed invention before amendment. Although the reference teaches the determination of frequency of vibration and rate of energy loss (see Abstract), it does not teach the currently amended limitation of simultaneously fitting the number "N" of damped sine waves to the plurality of data points. The Examiner finds no motivation to apply such a step to the specific method of this reference.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### **Conclusion**

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

United States Patent Application Publication US 2004/0243310 A1 to Griffin et al. discloses a fundamental mistuning model that uses normal modes and natural frequencies for predicting vibratory responses of bladed disks.

US Patent 6,614,613 B1 to Huang et al. discloses a phase technique for active damping in a service controlled actuator.

Both references fail to teach or fairly suggest Applicant's claimed inventions for at least the reasons given above.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Gutierrez whose telephone number is (571) 272-2215. The examiner can normally be reached on Monday to Friday.

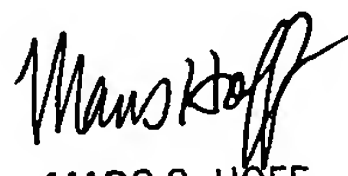
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on (571) 272-2216. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AG  
Anthony Gutierrez

5/27/05

  
MARC S. HOFF  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800